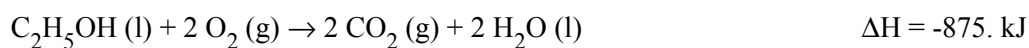


Hess's Law Worksheet

1. Calculate ΔH for the reaction $4 \text{NH}_3 (\text{g}) + 5 \text{O}_2 (\text{g}) \rightarrow 4 \text{NO} (\text{g}) + 6 \text{H}_2\text{O} (\text{g})$, from the following data.



2. Find ΔH° for the reaction $2\text{H}_2(\text{g}) + 2\text{C}(\text{s}) + \text{O}_2(\text{g}) \rightarrow \text{C}_2\text{H}_5\text{OH}(\text{l})$, using the following thermochemical data.



3. Calculate ΔH for the reaction $\text{CH}_4 (\text{g}) + \text{NH}_3 (\text{g}) \rightarrow \text{HCN} (\text{g}) + 3 \text{H}_2 (\text{g})$, given:



4. Calculate ΔH for the reaction $2 \text{Al} (\text{s}) + 3 \text{Cl}_2 (\text{g}) \rightarrow 2 \text{AlCl}_3 (\text{s})$ from the data.

